Ex Post-Evaluation Brief
Yemen: Sanitation in Bajil, Bait-Al-Faqih and Zabid

Programme/Client	1. Sanitation in Bajil, Bait-Al-Faqih (BMZ no. 1999 65 013); 2.Sanitation in Zabid (BMZ no. 1998 66 112)	
Programme executing agency	Hodeidah Water and Sanitation Local Corporation (HWSLC)	
Year of sample/ex post evaluation report: 2012/2012		
	Appraisal (planned)	**Ex post-evaluation (actual)**
Investment costs (total)	1. EUR 18.43 million 2. EUR 5.35 million	1. EUR 21.03 million **2.** EUR 10.37 million
Counterpart contribution (company)	1. EUR 0.58 million 2. EUR 0.75 million	1. EUR 2.80 million **2.** EUR 3.35 million
Funding, of which budget funds (BMZ)	1. EUR 17.85 / 17.85 million 2. EUR 4.60 / 4.60 million	1. EUR 18.23 / 18.23 million** 2. EUR 7.02 / 7.02 million**

* random sample; ** includes amount of 0.38 million carried over from Zabid to Bajil/ Bait-al Faqih

Project description: Establishment of municipal sewage collection systems and simple treatment plants for the aforementioned medium-sized towns (with respective population sizes between 30,000 and 75,000), and surface water drainage measures at the UNESCO world heritage site of Zabid. The sanitation systems were designed such that the treated sewage can be safely discharged into usually dry wadis or used for agricultural purposes.

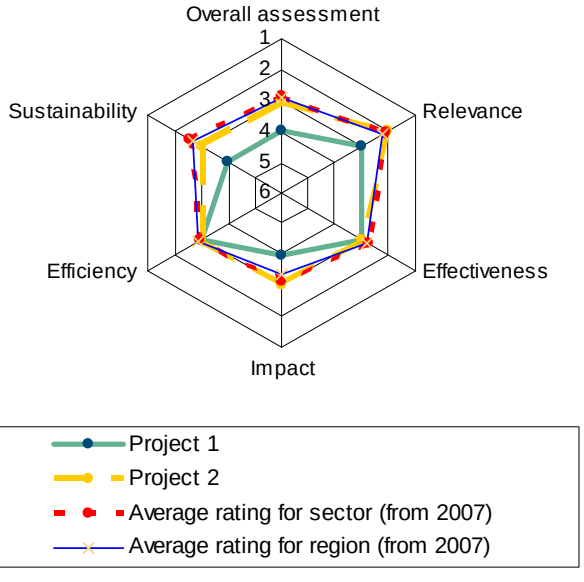
Objective: The projects aimed to sustainably improve sanitation in the towns involved, and thus help improve general health status (overall objective/ impact). The indicators for the project objectives/ outcomes were an 80% rate of connection to the central sanitation system for the urban population, the treatment plants' purification performance, the largely trouble-free operation of those plants and the suitability of the waste water for safe agricultural use. Impact achievement is measured by the reduction in water-borne diseases.

Target group: The target group of the projects were the combined total of 114,000 inhabitants of the three project towns.

Overall rating: Bait-al-Faqih/Bajil project: 4
Zabid project: 3

In the Zabid project, the desired results were achieved, at least to a large extent – as measured by connection rate, waste water quality and operational infrastructure performance. In Bait-al-Faqih and Bajil the systems operate largely on an *ad hoc* and makeshift basis, with a significantly lower connection rate. At all sites, the utilities have made noticeable efforts to increase the connection rate and ensure operation of the facilities, even under difficult conditions. Risks persist with regard to the operators' limited capacities; besides, the general political- economic framework that remain critical.

Rating by DAC criteria



EVALUATION SUMMARY

Overall rating: Having evaluated the individual criteria, the overall results of the Bait-al-Faqih/Bajil project are rated as no longer satisfactory, and those of the Zabid project as satisfactory.

Overall ratings	Bait-al-Faqih und Bajil project:	**4**
	Zabid project:	**3**

Relevance: At project appraisal, the increasingly unsatisfactory conventional practice of using septic tanks for sanitation was identified as core problem in the three project towns: a high building density and improved water supply technology (leading to an increase in waste-water) created mounting risks for the town centres' structural stability. With an already critical health situation, the additional hygiene risks were categorised as no longer acceptable. With hindsight, this assessment appears justified. The intervention logic of the selected approach has to be judged as a necessary, though not sufficient contribution toward solving the problems identified. It nonetheless included several elements of an integrated water resource management (like recycling treated sewage for agricultural use). The challenges of inadequate hygiene awareness were already clearly evident at the time; they were addressed only partially through accompanying technical assistance. Critical points to note in the case of Bait-al-Faqih and Bajil are design weaknesses, which compound the risk of operational malfunctions and complicate corrective measures.

The urgently needed reform and adjustment of the institutional framework was supported through complimentary interventions by German Technical Cooperation (TC). The water supply and sanitation sector traditionally forms the focus of Yemeni-German development cooperation, and the project designs are aligned with the Yemeni Government’s Water and Sanitation Sector Investment Plan (WSSIP).

Relevance of the Zabid project is rated as good, and that of the Bait-al-Faqih / Bajil project as satisfactory.

Sub-rating	Bait-al-Faqih and Bajil project:	3
	Zabid project:	2

Effectiveness: With regard to the achievement of outcomes, i.e. improving sanitation, the picture is mixed one. The desired connection rates were achieved only partially; nonetheless, the target was achieved consistently by more than 90% in those urban zones categorised as especially critical. The treatment plants' purification performance meets hygienic target values, although the treated sewage's biological load falls short of expectations. This is at least partly due to a high sediment inflow, which was already foreseeable during the planning phase, but – according to the interviews – not sufficiently taken into account, particularly in Bait-al-Faqih and Bajil. A further contributing factor is the contamination of sewers with domestic refuse and other solid waste. For largely the same reasons, smooth operational performance was not achieved to the degree expected. According to information

available, malfunctions are recorded systematically and rectified promptly wherever possible. The overall effectiveness of the projects was rated as satisfactory.
Sub-rating (both projects): 3

Efficiency: The production costs for Bait-al-Faqih and Bajil were EUR 285 and EUR 196/inhabitant respectively, which is within the normal range for Yemen. The particularly difficult conditions in Zabid led to significantly higher average costs (EUR 353/inhabitant): the town's UNESCO world heritage status meant that a range of issues concerning the conservation of historic buildings and monuments had to be taken into account. At all three sites, the start of implementation was delayed by a good two years; moreover, the actual implementation period was exceeded by significantly (between 12 and 28 months). This was caused mainly by the delay in meeting contractually agreed requirements for cost recovery, legal and administrative difficulties in acquiring the land for the treatment plants, discrepancies with design parameters during the planning stage – as well as overly optimistic planning targets. By 2012 the utilities had generated sufficient tariff revenues to cover their own current expenditure[1;] however, there has been a reverse trend since the 2011 crisis. This suggests that allocative efficiency remains basically adequate – as is the case with the water losses of 20-23% for all three operations, which remain comparatively low by national and provincial standards. Within available means, the operators performed their tasks and endeavoured to uphold the operation of their supply and sanitation facilities, even under the more difficult conditions created by the most recent crisis. One critical point to note is the lack of preventive maintenance encountered especially in Bait-al-Faqih and Bajil. This was partially due to the aforementioned operating problems, which tie up a large proportion of the capacities. The malfunctions are partly caused by design, but partly also a result of the wilful disposal of solid waste, which in turn leads to assume that acceptance and ownership on the part of the population are insufficient.

Against this background, the efficiency of the Zabid project is rated as satisfactory, whereas efficiency rating for the Bait-al-Faqih and Bajil projects is no longer satisfactory.

Sub-rating	Bait-al-Faqih und Bajil:	4
	Zabid project:	3

Overarching developmental impact: With regard to the desired health results, a significant reduction (60-80% on average) in gastrointestinal diseases and malaria is to be observed *prima facie* in the project region. However, it should be noted that (1) during the same period, considerable efforts were made to improve health care, and that (2) the figures for 2005-06 and 2009-11 do not include data from all the relevant health facilities. Overall, it can be concluded plausibly that the projects have helped improve the health situation – albeit to a degree that cannot be precisely quantified. Moreover, institutional reform of the water sector is under way in Yemen since 2000, whose core element comprises de-centralised supply units that are largely autonomous, at least as far as operational management issues are concerned. This is being implemented in the three towns on

[1] though not the depreciation – which was also officially prescribed.

an exemplary basis through a combination of FC and TC. In the case of Zabid, a positive contribution is also being made to preserving a cultural heritage of global significance. However, with persisting uncertainties in terms of the political and security situation in Yemen, this has yet to generate significant economic effects, e.g. in the form of increased visitor numbers. The overall impact of the projects is judged as satisfactory.
Sub-rating (both projects): 3

Sustainability: The Yemeni partners strive to ensure adequate operation of the supply and sanitation facilities, even under the prevailing difficult conditions. This positive aspect deserves to be emphasised. However, the utilities' limited technical capacities have a countervailing effect, which contributes to limited maintenance budgets that have been, sometimes allocated *ad hoc* and inadequately prioritised. Installations in Bait-al-Faqih and Bajil, in particular, where the are largely operated as a skeleton service only, which has also led to an extensive lack of preventive maintenance. Moreover, the provision of external donor funds will remain absolutely essential in the medium term, particularly to finance investment expenditure, but also for large-scale repairs and maintenance measures. Moreover, this is likely to be aggravated by continuing negative economic trends, with consequential pressure on public funds. The Joint Socio-Economic Assessment performed by the donor community in early 2012 has analysed the effects of the recent economic and political crisis – *inter alia* – on the provision of basic social services; this indicates that such support may be forthcoming.

We rate the overall sustainability of the Zabid project as satisfactory. However, sustainability of the Bait-al-Faqih and Bajil projects are assessed as unsatisfactory.

Sub-rating	Bait-al-Faqih and Bajil project:	4
	Zabid project:	3

Notes on the methods used to evaluate project success (project rating)

Projects (and programmes) are evaluated on a six-point scale, the criteria being relevance, effectiveness, efficiency and overarching developmental impact. The ratings are also used to arrive at a final assessment of a project's overall developmental efficacy. The scale is as follows:

1	Very good result that clearly exceeds expectations
2	Good result, fully in line with expectations and without any significant shortcomings
3	Satisfactory result – project falls short of expectations but the positive results dominate
4	Unsatisfactory result – significantly below expectations, with negative results dominating despite discernible positive results
5	Clearly inadequate result – despite some positive partial results, the negative results clearly dominate
6	The project has no impact or the situation has actually deteriorated

Ratings 1-3 denote a positive or successful assessment while ratings 4-6 denote a not positive or unsuccessful assessment

Sustainability is evaluated according to the following four-point scale:

Sustainability level 1 (very good sustainability) The developmental efficacy of the project (positive to date) is very likely to continue undiminished or even increase.

Sustainability level 2 (good sustainability): The developmental efficacy of the project (positive to date) is very likely to decline only minimally but remain positive overall. (This is what can normally be expected).

Sustainability level 3 (satisfactory sustainability): The developmental efficacy of the project (positive to date) is very likely to decline significantly but remain positive overall. This rating is also assigned if the sustainability of a project is considered inadequate up to the time of the ex post evaluation but is very likely to evolve positively so that the project will ultimately achieve positive developmental efficacy.

Sustainability level 4 (inadequate sustainability): The developmental efficacy of the project is inadequate up to the time of the ex post evaluation and is very unlikely to improve. This rating is also assigned if the sustainability that has been positively evaluated to date is very likely to deteriorate severely and no longer meet the level 3 criteria.

The overall rating on the six-point scale is compiled from a weighting of all five individual criteria as appropriate to the project in question. Ratings 1-3 of the overall rating denote a "successful" project while ratings 4-6 denote an "unsuccessful" project. It should be noted that a project can generally be considered developmentally "successful" only if the achievement of the project objective ("effectiveness"), the impact on the overall objective ("overarching developmental impact") and the sustainability are rated at least "satisfactory" (rating 3).